

WINTER

2006

# *Natural* **OUTLOOK**

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

**Fresh from  
the Tap**

**Tougher standards, more monitoring  
coming to a water supplier near you**



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# Natural OUTLOOK

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Informing Texans about important natural resource issues*

## 1 A Tall Order

Safeguarding public health is the driving force behind more stringent federal drinking water standards. The TCEQ is responsible for overseeing implementation of these standards by local water suppliers and for ensuring that public drinking water is clean and healthy for all consumers.



## 6 Enforcement Reforms Take Hold

The TCEQ is entering the final stretch of a comprehensive project to improve the consistency of agency enforcement policies and actions, and to obtain maximum compliance with agency rules and regulations.

## 8 Houston Air Program Undergoes a Remake

In Region 12, Rebecca Rentz steps into the newly created role of air quality director just as the air program takes a turn in a new direction.

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With Mexico's water debt to the United States resolved, South Texas businesses and municipalities are recovering from years of water shortages. Now discussions on both sides of the border turn to better methods of drought management.

## on the back

### Alternatives to Outdoor Burning

While wildfires plague much of drought-prone Texas, the TCEQ is suggesting that conservation measures become a substitute for burning waste.

**COVER:** The essence of water is pure elegance, but clear does not mean clean. Before water comes out of the faucet, it undergoes a complex treatment process, including filtration and disinfection. Photo by Carrie Robertson/[thirdcoastphoto.net](http://thirdcoastphoto.net).



# A Tall Order

## *Drinking water standards require more screening for potential contaminants*

**T**urn on the kitchen tap and out comes crystal-clear water. It looks clean, but is it?

To answer that question, the TCEQ and its local utility partners run an extensive program to not only deliver drinking water to where it is needed but also to ensure that the contents are safe.

About 6,700 public water systems around the state operate under rules established by the TCEQ, which in turn has to satisfy federal drinking water requirements.

In recent years, the federal standards have expanded and become more stringent. The Environmental Protection Agency sets the limits on contaminant levels in drinking water to ensure the water is safe for consumption.

Since the late 1990s, EPA has instituted major changes requiring water systems to remove disease-causing microorganisms from surface waters, reduce arsenic and radionuclides from groundwater aquifers, and enact stricter controls regarding the chemical byproducts created when chlorine is used to disinfect water.

These new standards have been integrated into rules by the TCEQ and passed on to public water systems.

Like most states, Texas has primacy and is allowed to run its own drinking water program, including enforcement. To maintain primacy—and receive federal funding—Texas has to prove that its drinking water regulations are as strict, if not more so, than EPA's.

Texas receives, on average, \$60 million to \$80 million in federal loans each year for construction and repair of public water system infrastructure. The TCEQ gets \$12 million to \$14 million a year to support its drinking water programs, including water sampling and monitoring and laboratory analysis.

### **A Vital Public Service**

Of the estimated 23 million people living in Texas, the vast majority have at least one thing in common: they rely on a public water system for residential use. About 94 percent of Texans are public water consumers. Most of the rest have private wells.

Of the public water systems in business in 2006, about 4,600 are community water systems, such as those operated by cities. The remaining systems take on different forms—such as serving schools and factories, where people work but do not live, or providing service in places like rest stops and state parks, where people come and go.

All of the public water systems are required to monitor the levels of contaminants present in the treated water and verify that they do not exceed EPA's maximum contaminant level (MCL) established for each contaminant. This is the highest level at which risk assessments have shown no adverse effect on human health.

In all, EPA has set standards for about 90 contaminants in the major categories of microorganisms, disinfec-



Photo © 2006 Gary Regier

**Small-town water systems have had the most difficulty—and per-capita expense—in implementing new standards to reduce contaminants in drinking water.**

tants, disinfection byproducts, organic and inorganic chemicals, and radionuclides. EPA reports that in Texas the more common chemicals of concern are disinfection byproducts, arsenic, fluoride, and nitrate.

### **Public Health is Foremost**

Texas has been regulating public water systems by statute since the mid-1940s, though public health efforts started a few decades earlier, when typhoid fever was common in Austin. At the time, residents were drawing water from shallow wells along the banks of the



**The TCEQ regulates how often public water systems monitor their water for contaminants and report the results. Generally, the larger the population served by the system, the more frequent the monitoring and reporting requirements.**

the city's water supply was infiltrated by the *Cryptosporidium* parasite. These organisms, which are difficult to detect, are resistant to chlorine disinfection.

Of EPA's recent changes, two in particular have had a significant impact on Texas water systems.

One stricter standard applies to disinfection byproducts, which are potentially carcinogenic chemicals formed when a disinfectant such as chlorine reacts with naturally occurring organic carbon. This new standard presents a challenge to local water suppliers: how to provide protection from microbial pathogens while, at the same time, curbing health risks from disinfection byproducts.

About 300 systems in Texas have experienced some level of difficulty complying with Stage 1 of the disinfection byproducts rule, which applies to systems serving 10,000 or more people. The TCEQ is drawing up proposed Stage 2 rules for systems serving fewer than 10,000 people. Staff also is working on the long-term Stage 2 enhanced surface water treatment rule to address *Cryptosporidium* removal and inactivation.

New federal rules also apply to arsenic, an element that dissolves from rocks into water supplies. Citing studies that link long-term arsenic exposure to cancer, EPA established a standard of 10 parts per billion, replacing the old standard of 50 ppb.

About 150 systems in Texas were not in compliance with the arsenic standard when it took effect in early 2006.

The TCEQ's Buck Henderson says implementation of the new regulations have been difficult and costly for many water systems, especially the smaller ones.

Colorado River. A local official attending an out-of-state health conference returned with the news that chlorine should be applied to the wells to kill acute pathogens and stop the rapid onset of disease.

A few years later, Texas began setting standards for the construction of wells and surface water treatment plants, and for the use of disinfectants.

With passage of the federal Safe Drinking Water Act in 1973, all states

became subject to uniform standards and regulations, with some flexibility allowed for implementation, and EPA began to set MCLs.

Amendments to the act in 1996 required EPA to add contaminants to its regulations list and to tighten requirements.

The regulation expansion was fueled by a public health disaster that hit Milwaukee, Wis., in 1993. About 400,000 people became ill and dozens died after

“The agency has been proactive by alerting water systems as to what was coming,” said Henderson, manager of the agency’s Public Drinking Water Section. “With the Stage 1 disinfection byproducts rule, we started notifying suppliers prior to 2000. Initially, we estimated that 700 to 800 systems would be out of compliance, but by the time the regulation took effect in 2004, only about 300 were. Many had already gone to an alternative treatment system and therefore were in compliance.”

As a result of the new regulations, said Henderson, the quality of drinking water is monitored much more closely. Also, the state’s ability to stay on top of potential outbreaks has greatly improved.

“The burdens on the local systems, and even those on our own staff, have

grown,” he said, “but the bottom line has been enhanced protection of public health.”

To deal with new federal regulations, the TCEQ has outsourced more work that used to be conducted in-house. More than 41,000 water samples are analyzed each year just for chemical compliance. Most of the samples are collected by contractors, then submitted to a certified laboratory. The analytical results are sent to the TCEQ and public water systems.

The agency also has hired university student interns to assist with customer service, sampling and treatment, and data review.

To help water suppliers around the state stay up-to-date with new requirements, the TCEQ launched its own public drinking water symposium in

2004. The first conference drew 450 attendees; last year’s saw 650. The next conference will be held next August in Austin. Participation is free.

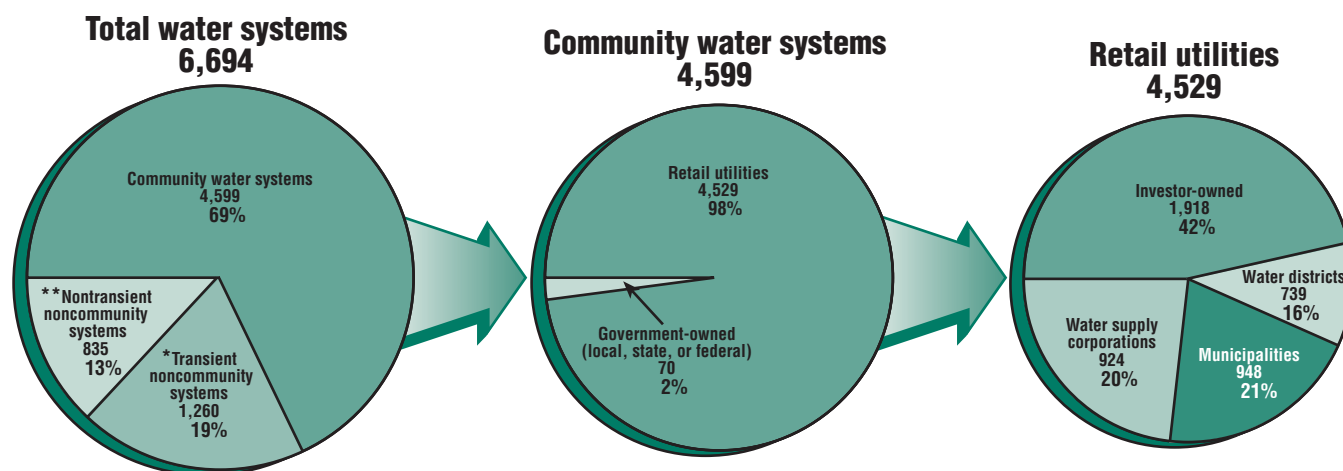
## Consumers in the Know

Part of the increased emphasis on drinking water standards has been a focus on accountability and the public’s right to know. Since 1999, public water systems have been required to provide consumers with an annual report on the quality of their drinking water.

Consumer Confidence Reports contain educational information, such as the type and source of water used by the system, and they report on the levels of any detected contaminants and the past year’s compliance with drinking water regulations. When exceedances of MCLs occur, the system has to

## Types of Delivery Systems in Texas

In mid-2005, there were 6,694 public water systems operating in Texas. These systems come in various configurations in order to serve communities as diverse as large cities or roadside rest stops.



\*A transient noncommunity system supplies water in places such as gas stations or campgrounds where people do not remain for a long period of time.

\*\*A nontransient noncommunity system regularly supplies water to 25 or more of the same people at least six months out of the year, but not year-round. Examples are schools, factories, office buildings, and hospitals having their own water systems.

Note: Percentages are rounded to whole numbers.



# Assistance for Small Water Systems

**W**hen new federal drinking water regulations take effect, the smaller community water systems are usually hardest hit. Small, rural systems are often geographically isolated, and frequently lack the infrastructure or technical expertise necessary to implement new regulations.

Larger systems, on the other hand, can draw on a large staff, bigger budgets, and other advantages of economies of scale.

Another factor affecting small, rural systems is that many naturally occurring contaminants are located in groundwater, and groundwater is often the sole source of drinking water in rural areas.

To help small public water systems, the TCEQ has participated in several demonstration projects and feasibility studies for systems needing technical and engineering assistance to meet the new drinking water standards.

## Removing Arsenic

Three rural public water systems in Texas are serving as demonstration projects as the Environmental Protection Agency tests various technologies for removing arsenic from groundwater. These projects are part of EPA's effort to support research and development that will help communities comply with the new arsenic standard by using effective, low-cost removal strategies.

The three demonstration sites are the Wellman Water Supply Corp. in Terry County (the Panhandle), the Webb consolidated school district in Webb County (South Texas), and Oak Manor Municipal Utility District in Brazoria County (Southeast Texas).

At each site, EPA and technology vendors are testing various arsenic-removal technologies and determining whether the removed arsenic can be disposed of as nonhazardous waste.

EPA is paying to install the technology and train local

operators who will maintain and monitor the equipment. At the conclusion of the projects, the new equipment will belong to the water systems.

Other small water suppliers also benefit by following the demonstration projects and learning about costs, operating procedures, and waste disposal requirements. This will help these utilities in choosing the best technology for their own systems.

## Dealing with Nitrate and Other Contaminants

In other efforts, the TCEQ has contracted with the University of Texas Bureau of Economic Geology to help find viable compliance options for public water systems that are in violation of drinking water standards.

The pilot project began in 2004 at the Red River Authority Truscott-Gilliland Water System, the Northside Water Supply Corp., and the Red River Authority Guthrie-Dumont Water System—all in North Texas.

All three systems have nitrate concentrations that exceed the federal allowable maximum contaminant level.

UT and an engineering subcontractor have examined compliance options to determine how each system could correct their deficiencies—by pursuing alternatives, such as new groundwater or surface water sources, or using different types of water treatment. To determine affordability, cost estimates are prepared for each alternative.

This project also addresses issues such as regionalization. Because many water systems in this area have nitrate problems, it might be possible for neighboring systems to share the cost of trying alternative treatment methods or establishing new sources.

Another 15 public water systems were evaluated in 2005, and an estimated 20 systems will be added in 2006.

EPA funding for this assistance project comes through the Drinking Water State Revolving Fund.

describe the health effects and the measures taken to restore safe water.

If a public water system fails to have its water tested, as required, or fails to report test results correctly to the TCEQ, this constitutes a monitoring or reporting violation.

In 2004, the agency cited 1,368 water systems with a total of 2,179 violations (some systems had more than

one violation). About 52 percent of these violations were associated with monitoring and reporting activities. Most water systems were able to return to compliance.

About 45 percent of violations that year were related to microbiological or chemical MCLs. About half of these systems returned to compliance immediately by proving the original

detections did not reflect conditions throughout the water system. Many others returned to compliance after making changes to their treatment procedures and resampling to document reduced levels.

Problems with treatment techniques represented about 3 percent of the violations.

When a public water system has

# Keeping Water Clean

When a crisis affects a public drinking water system, a boil-water notice cannot be far behind.

That's usually the sequence of events with problems such as a water main break, a drop in water pressure, or storm damage. In the aftermath of Hurricane Rita, for example, the TCEQ issued a blanket boil-water notice for much of East Texas after several million residents experienced power outages or pressure loss.

Boiling tap water kills harmful bacteria and other microbes that can enter a water system during mechanical failure. Potentially contaminated water should be boiled, then cooled, before being used for drinking, cooking, making ice, or brushing teeth.

Disinfecting water is particularly important for infants, the elderly, and people with compromised immune systems.

Local water systems will notify customers when the boil-water notice is no longer in effect.

**Boil instructions:** The water should be brought to a vigorous boil and left to boil for two minutes. The flat taste can be eliminated by shaking the water in a bottle or pouring it from one container to another. In addition to boiling, other options are to purchase bottled water, obtain water from other sources, or apply a disinfectant, such as liquid chlorine bleach.

decline in recent years as more federal regulations have been established and passed down to the states.

However, as water systems find new treatment strategies, the overall compliance figure is expected to return to previously acceptable levels. Small systems usually need several years to make changes and reach compliance, so the number in good standing is expected to increase in 2006. ♻️

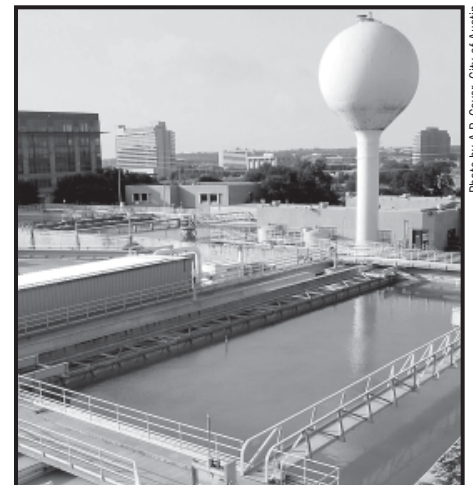


Photo by A.P. Covari, City of Austin

This plant in downtown Austin begins the treatment of raw water drawn from a nearby lake. The laboratory tests for 90 possible contaminants to ensure meeting state and federal standards.

significant or repetitive violations of state regulations, the case is referred to TCEQ enforcement staff.

In the 2005 fiscal year, which began Sept. 1, 2004, the agency issued 118 enforcement orders resulting from violations of drinking water regulations. Those systems were fined a total of \$218,000; another \$19,000 was contributed to supplemental environmental projects in local communities.

## Compliance Upswing Predicted

EPA's contaminant-by-contaminant approach to improving drinking water quality has been complicated and expensive, requiring local systems to implement new filtration and chemical treatments.

For the arsenic rule, for example, EPA estimated the new standard would cost households in small water systems \$38 to \$337 each per year; in larger

systems, \$1 to \$32 per year. Costs depend on the size of the water system and how many people are served.

Last year, about 87 percent of Texans were served by public water systems that met state drinking water standards. This figure has been in

## Leaders of the Pack

Texas has the most community water systems of any state, according to 2004 national data. This is significant because it is the community systems that bear the brunt of implementing new drinking water regulations.

Top 5 states	Number of community water systems	Population served (in millions)
Texas	4,489	22.7
California	3,123	32.9
New York	2,816	17.9
Washington	2,274	5.6
North Carolina	2,174	6.4

Source: Environmental Protection Agency

# Enforcement Reforms Take Hold

## *Second year of review sees more recommendations approved*

**T**he TCEQ enforcement process review continued during 2005, with major revisions affecting a number of programs. The reforms are expected to streamline various aspects of the enforcement process so that more attention can be focused on major environmental violations.

The project, which began in 2004, represents the largest internal review ever conducted by the agency (see *Natural Outlook* articles, Spring 2004 and Winter 2005).

The goals are to improve the consistency of enforcement policies and actions, and to obtain maximum compliance with agency rules and regulations.

“The size and importance of this undertaking required us to be thorough and deliberate, because we covered virtually every aspect of the enforcement process,” said TCEQ Executive Director Glenn Shankle.

The outcome, he added, has been a reassessment of investigative priorities, coupled with a move to adopt a “risk-based” approach to enforcement.

“This approach will allow us to concentrate our enforcement resources on violations that pose the greatest threat to the public and the environment,” he said. “As a result, investigations will be streamlined and more focused, allowing for sampling and monitoring activities to increase.”

Shankle predicts that commissioners will wrap up the enforcement review in 2006 by considering reforms to the penalty policy and the compliance history program.

### **On-the-Spot Citations**

When the review got under way in 2004, teams representing divisions across the agency were assigned to examine the strengths and weaknesses of all the enforcement functions.

Working from recommendations drafted by those teams, the commissioners began setting a new direction for the enforcement program and finding ways to make more efficient use of investigators’ time and abilities. One outcome was the addition of a new enforcement tool.

Field citations will be used for the first time this year

for a small number of clear-cut, non-discretionary violations. Under a pilot program that began in January of this year, investigators who document certain environmental violations will be allowed to offer a citation on-site. This gives the regulated entity the opportunity to acknowledge the violation and quickly settle the case.

If the violator signs the citation and sends it to the TCEQ, pays the associated penalty within 30 days, and addresses the corrective action, the penalty will be discounted by 30 percent. The reduction, which is granted in exchange for the expedited settlement, saves both time and money for the agency and the regulated entity.

More serious infractions will still be handled through the traditional agency enforcement process.

Commissioners determined that only nine violations will be candidates for field citations during the pilot program. Estimates are that as many as 150 field citations could be issued in the first year. Not all of those, however, will likely be settled.

Under the rules, a regulated entity can receive a field citation for any one violation only once in a five-year period. As with notices of violations, the field citation becomes a part of an entity’s compliance history.

### **Other Reforms Emerge**

In recent months, the commissioners have approved other measures designed to make the enforcement process more efficient and effective. Among these are:

**Enforcement initiation criteria.** For the first time, divisions throughout the TCEQ were invited to comment on an agency guidance document that is used primarily by field investigators. By incorporating these comments into the enforcement initiation criteria, the agency is able to ensure better consistency when making decisions on how to handle air, water, and waste violations.

**Supplemental environmental projects.** The option of SEPs, which can be undertaken to offset full or partial environmental penalties, will be discussed sooner in the process—during the investigators’ on-site exit briefings.



Violators interested in sponsoring a SEP must meet a deadline for making that choice. The agency expanded the list of pre-approved eligible projects and emphasized the need for direct environmental benefits. SEPs must take place within the community in which the violation occurred, preferably targeting the same environmental media (a SEP arising from an air violation should result in a project that improves air quality). SEP sponsors must document expenses and the environmental benefits achieved.

**Communications.** The agency has made more enforcement-related information available in easier-to-use formats. This includes direct Web links to topics such as complaints reporting, citizen-collected evidence, the nuisance-odor protocol, and the overall enforcement process. Also, to improve correspondence, agency contacts and phone numbers are now included in letters pertaining to notices of violation or notices

of enforcement. The letters also explain opportunities for appeal.

**Environmental complaints.** On the agency Web site, the home page now links to the environmental complaints page at [www.tceq.state.tx.us/goto/report\\_problem](http://www.tceq.state.tx.us/goto/report_problem). This page features a choice of an online complaints form, toll-free phone number, or e-mail address for reporting environmental problems. It also links to information on odor problems—training has been enhanced for investigators who handle such complaints—plus information on the types of other complaints that fall in the TCEQ’s jurisdiction. Another new link from the home page, [www.tceq.state.tx.us/compliance/complaints/track.html](http://www.tceq.state.tx.us/compliance/complaints/track.html), describes the enforcement process—from violations to final actions—and provides other links for tracking complaints and individual pending enforcement actions by county, region, or company name. ♻️

## Field Citation Violations and Penalties

Only nine violations, in four agency programs, are approved for the expedited procedures and reduced penalties. If an entity pays the field citation within 30 days of receipt and takes corrective action, the penalty will be reduced by 30 percent. Major sources, which have a more significant impact on the environment, will pay a larger penalty than will minor sources.

Violations in the environmental programs	Traditional penalty (major/minor source)	Reduced penalty (major/minor source)
<b>Petroleum storage tanks</b> Failure to possess a valid TCEQ delivery certificate before receiving fuel Failure to implement inventory control methods Failure to provide corrosion protection Failure to provide a release-detection method Failure to provide spill containment and overfill prevention	NA/\$1,250 \$5,000/\$2,500 \$5,000/\$2,500 \$5,000/\$2,500 \$5,000/\$2,500	NA/\$875 \$3,500/\$1,750 \$3,500/\$1,750 \$3,500/\$1,750 \$3,500/\$1,750
<b>Air quality</b> Failure to have Stage 1 vapor recovery equipment Failure to have Stage 2 vapor recovery equipment	\$2,500/\$1,250 \$2,500/\$1,250	\$1,750/\$875 \$1,750/\$875
<b>Water quality—storm water</b> Failure to obtain a multi-sector general permit (without a documented discharge)	\$2,500/\$1,250	\$1,750/\$875
<b>Occupational licensing</b> Failure by an individual to have the required license to operate a regulated entity	NA/\$300	NA/\$210

# Houston Air Program Undergoes a Remake

## *Region 12 gets an air quality administrator and a revised enforcement structure*

**A** new post created in the Houston regional office will help the TCEQ reach its goals to improve air quality, agency officials agree.

Rebecca Rentz of Houston has been named the TCEQ's first air quality director for a regional office. Rentz will draw on her experience in government policy and environmental law to bring greater emphasis and coordination to the state's clean-air strategies in Region 12, which covers much of Southeast Texas.

"Over the years, I've been involved in a broad range of environmental issues, and always found it interesting," says Rentz. "I especially enjoyed working on the 1-hour ozone issues when I was in county government."

Rentz was on the staff of Harris County Judge Robert Eckels from 1996 to 2000. Serving first as

legislative coordinator, then as policy director for environmental health issues, she worked hand in hand with county, city, and state officials, as well as the private sector, during development of Houston's portion of the State Implementation Plan (SIP), a blueprint for attainment of federal air quality standards.

Her prior experience included a stint at the state Capitol as a legislative aide and a year in Japan as an English teacher.

While working for Eckels, Rentz also attended law school at the University of Houston. In 2001, she rolled her new law degree and public-sector experience into a position at the Houston law firm of Bracewell & Patterson (now Bracewell & Giuliani).

As an environmental law attorney, she represented



The sources of air emissions in Houston are numerous. The metropolitan area is host to large industrial and petrochemical complexes, and its extensive network of freeways is filled with vehicles each day.

clients on issues involving air, water, and waste, as well as regulatory compliance. She also advised regulated entities on ozone-control requirements under the SIP.

“I think I bring a solid knowledge of the air quality issues to the director’s position,” said Rentz, who joined the TCEQ in January 2006. “And I have a broad range of contacts in the community here. So I’m not walking in as someone brand-new and facing a steep learning curve.”

That experience will prove to be important in complying with federal requirements. As Rentz points out, “We don’t have a whole lot of time—there are federal deadlines.”

The Houston-Galveston area is classified as “moderate” nonattainment for 8-hour ozone, and faces a 2010 deadline to comply with the federal standard.

In that part of Texas, a complex mix of factors contributes to air pollution. Not only is the Houston metropolitan area densely populated, with accompanying high traffic volumes, it also serves as a hub of petrochemical production, which produces significant levels of emissions. Moreover, the meteorology of the Gulf of Mexico contributes to ozone formation and movement.

## A New Direction

The creation of the air director’s position came at a turning point in the Houston air program and in the relationship between the TCEQ and the city of Houston.

For many years, the TCEQ and the city shared several central duties in the air quality program. But in September 2005, the agency did not renew Houston’s contract to conduct routine inspections at industrial plants within the city limits.

John Steib, TCEQ deputy director of the Office of Compliance and Enforcement, said the contract was dropped when the two parties could not agree on a joint enforcement strategy. However, the \$1.5 million in state funds previously distributed under the contract continues to be spent in Houston on air quality investigations, personnel, and related issues, he said.

In addition to creating the air director’s post, the TCEQ has added 10 inspectors to the regional staff, and has taken other steps to ensure that all the duties previously fulfilled by city government continue to be covered. For one, a contract with the University of Texas at Arlington has been issued for enforcement investigations at

## Air Quality Oversight

The newly created position of Houston air quality director carries a broad range of responsibilities that are specific to Region 12. Chief among those are:

- Advise TCEQ management on any emerging areas of air quality concerns within the Houston region.
- Counsel the executive director on legal issues relating to Houston’s portion of the State Implementation Plan and other air quality issues.
- Assist agency officials with air quality problems requiring immediate enforcement or corrective action.
- Stay apprised of current air-source data in the region.
- Develop recommendations for risk-based inspections and enforcement actions.
- Brief local government officials and industry leaders on TCEQ strategies; represent the agency at stakeholder meetings.
- Solicit input on possible air-improvement solutions from Houston-area governments, industries, and environmental and trade groups.



Rebecca Rentz brings experience from the public and private sectors to her assignment at the TCEQ.



Stage 2 recovery operations and petroleum storage tanks located within the city of Houston. The nine-month contract began Dec. 1, 2005.

Other activities—such as leak detection and repair, investigations into emissions events and citizen complaints, and enforcement follow-up—are now handled by Region 12 staff.

“We are meeting all the requirements that had previously been contracted to the city of Houston,” said Steib.

“Our next task is to evaluate the industrial sites in a manner that’s consistent with our risk-based investigative strategy.

“This enforcement approach considers a number of factors about the industrial site, such as the location and the impact of plant activity on local residents. Then we

determine the type and frequency of investigations needed,” he said.

Doing so will allow the agency to focus more on sites that pose a risk to human health and the environment, he said, “rather than investigating the same routine sites over and over, whether or not they have a record of good compliance.”

Meanwhile, the city of Houston retains the authority to conduct its own air quality program, said Steib, adding that “we continue to communicate and work on common issues together. The TCEQ appreciates the city’s interest and activity in support of cleaner air.”

## Leadership is Key

Steib said the idea to appoint a top air administrator in Houston came from Executive Director Glenn Shankle while the TCEQ was re-evaluating the air program last fall.

Shankle and agency managers discussed the need for a strong leader who would be devoted solely to the Houston program and could coordinate the myriad of tasks and issues associated with the region’s air quality.

“We realized we needed a senior representative stationed in Houston who would focus on all aspects of the air program, including monitoring, the SIP, investigations, public outreach, and media relations, in addition to serving as our liaison with local governments, community groups, and industry,” said Steib.

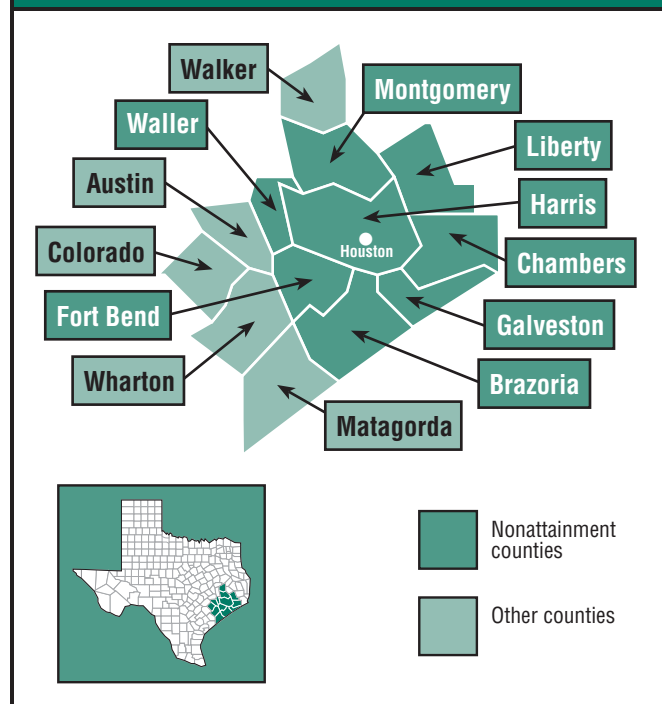
With Rentz filling the position, “she is that senior representative on all things pertaining to air quality, whether it’s working with plant managers or city officials or speaking to a civic organization,” he said. “She also has the authority to marshal the appropriate resources to address emerging issues.”

Shankle commended Rentz for her “extensive experience in environmental law and knowledge of the people and the issues in the Houston region.” This background “makes her an excellent choice for this unique position,” he said.

The results in Houston might have implications for other urban areas facing deadlines for reducing ozone levels.

TCEQ officials say the new structure will be evaluated to determine if it would be appropriate for other nonattainment areas, such as Dallas-Fort Worth or Beaumont-Port Arthur. 🌿

## Air Quality Concerns in Region 12



The TCEQ’s Region 12 encompasses 13 counties in and around the Houston metropolitan area. Eight of those counties are classified as nonattainment under the 8-hour ozone standard, which took effect last year. The deadline for improving air quality to comply with federal standards is June 15, 2010.

# Shared Water Flowing Again

## *Resolution of Mexico's water debt opens the way for sustainability planning on the Rio Grande*

In the early hours of Sept. 27, 2005, the last transfer of water owed by Mexico was credited to the United States at the Anzalduas Dam near Mission, marking the first time in more than a decade that the two countries could agree that a 61-year-old treaty was being upheld.

The final water delivery was hailed as the beginning of a new era in dealings between government entities and economic interests along the international border.

The Rio Grande is a shared natural resource that has sustained communities on both sides of its international banks, and divided policymakers over water use and management.

Under a treaty signed in 1944, the United States and Mexico share water from the Rio Grande and the Colorado River. Mexico's obligation is to transfer from six Rio Grande tributaries a minimum of 350,000 acre-feet (af) of water a year, on average, over delivery cycles lasting five years.

In 1992, Mexico began falling behind and accumulating a water debt. Over the years, the debt climbed to 1.5 million af.

Negotiations to resolve the dispute eventually reached the highest governmental levels, as Presidents George W. Bush and Vicente Fox included discussions of the water-sharing in their one-on-one meetings. Gov. Rick Perry also encouraged the Fox administration to ensure that Mexico complied with the terms of the 1944 treaty.

By the time a repayment schedule was agreed upon in late 2004, the debt was fixed at 716,670 af, which accounted for water already delivered specifically for debt reduction in the first two years of the 2002-2007 delivery cycle.

TCEQ Chairman Kathleen Hartnett White called the long-awaited resolution "historic," and applauded preservation of the treaty.

"This agreement not only repays all the water owed," she announced, "it adds certainty to future water deliveries for Texas Rio Grande water-rights holders, particularly farmers and ranchers who depend on this water for their livelihoods."

Just how this historic agreement was reached is proving to be a valuable lesson, which may help shape policy decisions to come.

### **Texas Takes a Stand**

In March 2005, when U.S. Secretary of State Condoleezza Rice and Mexican Secretary of Foreign Affairs Luis Ernesto Derbez announced that the water debt would be repaid, the

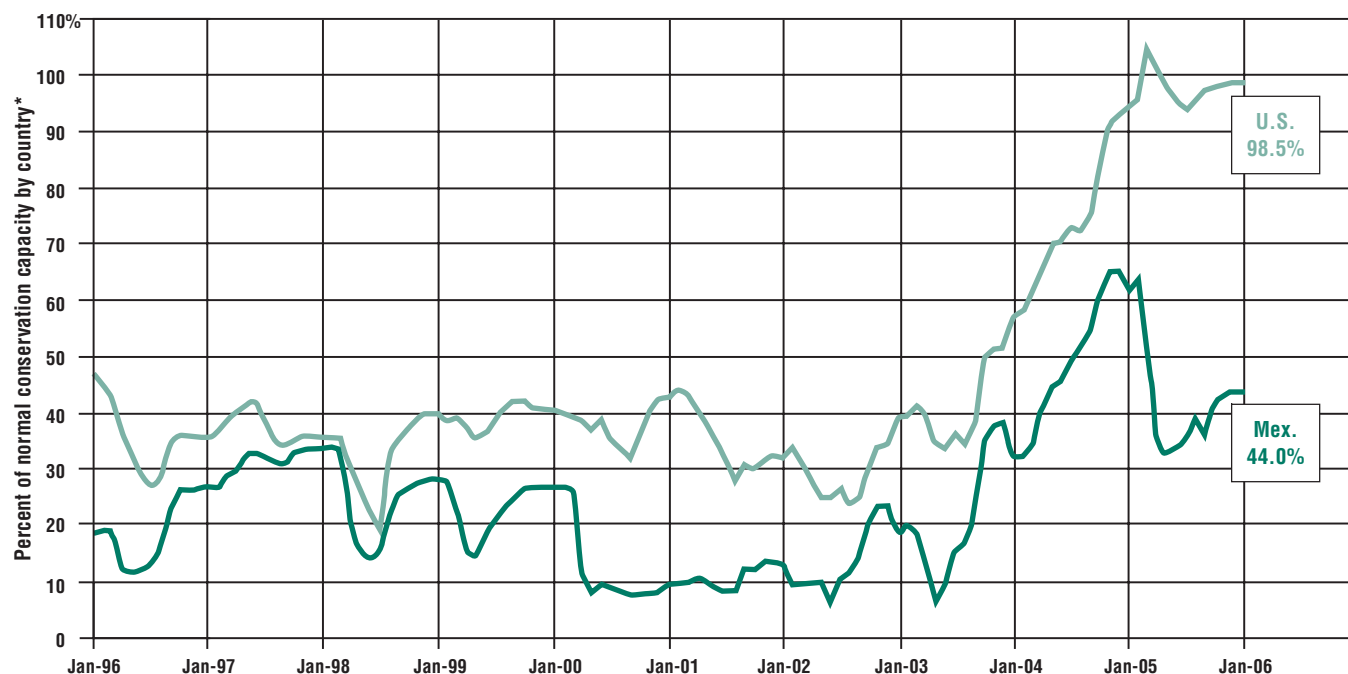
## Rio Grande Basin



Waters entering the Rio Grande below Fort Quitman, which is 60 miles downstream from El Paso, are apportioned to the United States or Mexico by terms set out in the 1944 water treaty. Under those requirements, Mexico is expected to deliver to the U.S. a minimum of 350,000 acre-feet of water each year, on average, over a five-year cycle. The deliveries are stored at the international reservoirs of Amistad and Falcon.

## Combined Storage Levels of Amistad and Falcon

January 1996-January 2006



During the drought years, storage levels remained low in the Amistad and Falcon reservoirs. But with decent rainfall and water repayments from Mexico, U.S. levels soared from mid-2003 to early 2005. Levels dropped that spring, as in most years, when irrigation resumed during planting season. By early 2006, U.S. storage was 98.5 percent of its capacity; Mexico's, 44 percent. This difference reflects management decisions on inflows and releases.

\*Normal conservation capacity refers to water storage under normal operations. Additional capacity—anything above 100 percent—is held available to deal with flooding.

Source: International Boundary and Water Commission

news swiftly made the rounds of U.S. federal agencies that had engaged in years of negotiations with their Mexican counterparts.

But it was in Texas—most notably South Texas—where a concurrent announcement by Gov. Perry reverberated the loudest.

Texas was the sole recipient of the overdue water transfers, and the many years of waiting for full repayment had taken a toll on businesses and municipalities along the border. The region had been suffering the effects of a prolonged drought while having to deal with the multiple pressures of a fast-growing population and industrialized base.

Of the 1,400 Texas water-rights holders on the Rio Grande, about 85 percent represent irrigators; the rest are municipalities.

Growers especially have relied on the annual water deliveries to maintain production levels. South Texas is a

major supplier of citrus fruit, vegetables, and grain. Agricultural producers describe their economic losses during this period as devastating.

“There have been water-availability issues along the border for years—some created by weather, some man-made,” explains Carlos Rubinstein, the TCEQ watermaster for the Rio Grande. He also oversees the Harlingen and Laredo regional offices.

Adding to frustrations over debt repayment, the international dispute was being managed as a federal matter, leaving Texas with no legal standing.

“Finally, through the insistence of Gov. Perry and many officials from Texas, we were able to persuade everyone that arriving at a debt repayment plan should be done in a way that’s beneficial to Texas,” says Rubinstein. “After all, we’re the ones charged under the state water code with protecting those water rights.”



It took time for that recognition to occur, he adds, “just as it took time for Texas and Mexico to identify better ways to utilize the water in the basin. At that point, however, we became a part of reaching a solution.”

As the TCEQ’s point man on water-debt negotiations, Rubinstein shuttled to Washington, D.C., to meet with the State Department, the International Boundary and Water Commission, and the National Security Council. He also conferred with Mexican officials on viable water delivery and debt repayment plans.

One important breakthrough, he recalls, came in 2002 when Mexico agreed to establish a minimum municipal reserve, or a target for water storage, which Texas already had for its local governments. “Once you know what that reserve number is, it definitely helps with planning,” he says.

Mexico also began investing in infrastructure to improve water conveyance systems. Both countries have now spent millions of dollars on improved methods of conserving water.

Another significant development occurred in late 2003, when Mexico agreed to make a major transfer of water just before the peak planting season in the Rio Grande Valley. At that time, rainfall had been plentiful in Chihuahua, and that

state’s reservoir levels were known to have increased over the previous year. Overdue rains along the upper and middle Rio Grande had also contributed to the reserves at the Amistad and Falcon international reservoirs.

**An acre-foot of water equals 325,851 gallons.  
This volume would cover an acre of land with 12 inches of water.**

The many rounds of negotiations resulted in some important agreements. For one, Mexico committed to developing a drought-management plan for the basin. Both governments endorsed better data exchange on water availability, projected water demands, water inflows to reservoirs, and Mexico’s water-management regulations. Also, there was a mutual pledge to hold annual meetings to assess basin conditions and to mitigate the impact of drought through appropriate water deliveries from alternate sources.

## Debt Retired

In 2005, the United States and Mexico not only resolved their remaining differences, but initiated steps to avert future disputes over water sharing. First, however, the water transfers were conducted from March through September to wipe out the accumulated debt.

Looking back, the TCEQ chairman says both countries have much to be proud of because they accomplished so much. “Yes, there are still matters to work on, among them the need to manage future droughts, improve water use efficiencies, and protect the river’s ecosystem. But we now recognize and respect our roles as partners, not adversaries, in the Rio Grande basin,” says White.

She said the spirit of mutual respect was evident in November 2005 at the Binational Rio Grande Summit held in McAllen and Reynosa, Tamaulipas.

“In part, it was a celebration of the treaty resolution,” she says. “It was also the first annual meeting to talk about sustainable development in the basin, with emphasis on how to prevent this problem from happening again.”

Rubinstein says he, too, is optimistic about the outlook for the Rio Grande. “When the water debt was hanging over our heads, it clouded any other discussions on how to better manage the basin. Now the atmosphere is very cordial and cooperative. Our water experts can come together without any such cloud, knowing we can resolve our differences while preserving the treaty.” 🌱



**In March 2005, TCEQ Chairman Kathleen Hartnett White, at the podium, joined Gov. Rick Perry and other state officials to announce the successful conclusion to treaty negotiations between the United States and Mexico. The historic announcement was made in Mission, which was one of the communities in the Rio Grande Valley affected by water shortages. Joining White in lauding the mutual accord were, from left, state Sen. Juan “Chuy” Hinojosa, Agriculture Commissioner Susan Combs, Perry, and state Rep. Kino Flores.**

# Alternatives to Outdoor Burning

**M**uch of Texas has been under an extreme wildfire threat due to dry, windy conditions. A burn ban, which prohibits most outdoor burning, has affected about 200 counties this winter.

TCEQ rules prohibit most types of outdoor burning, with some exceptions. Also, many local governments have ordinances restricting outdoor burning.

The TCEQ has long advocated alternatives to burning as a means of waste disposal. Even when weather conditions are not a concern, there are safer, more efficient ways of disposing of waste. Here are some practical solutions.

**Recycling.** Separate salvageable metal from other material—manually or by mechanical means—and sell it at a salvage yard. The salvage yard will take the material to a scrap metal recycler.

**Composting.** Much of the waste from landscape maintenance can be composted on-site easily and cleanly.

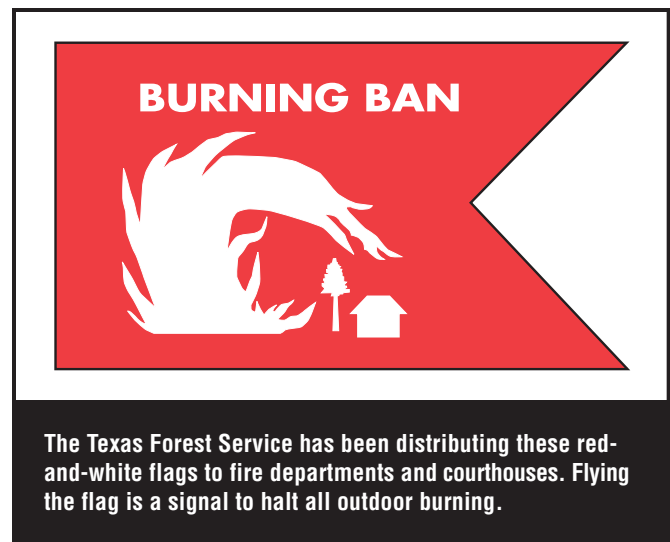
**Mechanical chipping or mulching.** Debris from land clearing or tree trimming is often handled on-site. A wood chipper can turn discarded wood into mulch, which is used for soil enrichment, or just reduce the volume of waste that must be disposed of. Some landfills have chippers for handling wood waste, and certain small

(Type IV) landfills accept brush.

TCEQ specialists are available to assist with questions on outdoor burning. In fact, for certain kinds of allowable burning, a TCEQ regional office must be notified ahead of time.

For more information on outdoor burning or contacting a regional office, call the TCEQ at 800/447-2827.

The TCEQ also has guidance documents on the outdoor burning rule. Go to [www.tceq.state.tx.us/publications](http://www.tceq.state.tx.us/publications) and enter “burn” in the keyword field.



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